

VULCAN

**INSTALLATION &
OPERATION MANUAL**

VF SERIES ELECTRIC FRYERS

MODELS

<i>VF1</i>	<i>ML-52913</i>
<i>VF90</i>	<i>ML-52917</i>
<i>VFD90</i>	<i>ML-52532</i>
<i>VF1D</i>	<i>ML-52538</i>



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INSTALLATION, OPERATION AND CARE OF VF SERIES ELECTRIC FRYERS

KEEP THIS MANUAL FOR FUTURE REFERENCE

GENERAL

Vulcan-Hart fryers are produced with quality workmanship and material. Proper installation, usage and maintenance of your fryer will result in many years of satisfactory performance.

It is suggested that you thoroughly read this entire manual and carefully follow all of the instructions provided.

Standard features include stainless steel fry tank and front, a high limit device, twin baskets, and a lift-out fry tank which is easily removed for cleaning.

The VF1 and VF1D floor model fryers are equipped with 6" (15 cm) adjustable legs. The fryers may be ordered without legs for installation on a masonry base. As an optional extra, the fryers can be supplied with a 4" (10 cm) toe base instead of legs.

Optional features include extra fry tanks, a large, single basket supplied in place of twin baskets, siphon and strainer bags, casters (floor models only), stainless steel fry tank cover, and extra sets of twin or single baskets. Stainless steel side(s) and back are also available as options.

Model	Width/Style	Controls	Automatic Basket Lift	Melt Cycle
VF1	20" Floor Model	Mechanical	Opt.	Opt.
VF1D	20" Floor Model	Solid State	Opt.	Std.
VF90/VFD90	20" Frymate	N/A	N/A	N/A

The VF90 and VFD90 Frymate Work Stations may be installed next to either of the VF Series Fryers. The top draining section has a lift-out screen and center drain into a 3-quart (2.8 L), slide out drain pan. The interior of the cabinet has a storage space for 4 standard #200 pans in drawer-type, non-tilt pan slides. Pans are not supplied with the Frymate.

The Frymate is equipped with 6" (15 cm) adjustable legs. The Frymate may be ordered without legs for installation on a masonry base, or with an optional 4" (10 cm) toe base instead of legs.

INSTALLATION

Before installing, verify that the electrical service agrees with the specifications on the rating plate located on the inside of the door panel. If the supply and equipment requirements do not agree, do not proceed with the installation. Contact your dealer or Vulcan-Hart Company immediately.

UNPACKING

This fryer was inspected before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of the shipment. Immediately after unpacking, check for possible shipping damage. If the fryer is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

Carefully unpack the fryer.

Do not use the door or its handles to lift or move the fryer.

LOCATION

The fryer may be installed at 0" clearance from the back and side walls. The fryer must be installed at least 16" (41 cm) away from any open top flame appliance. Position the fryer so it is easily accessible for service.

INSTALLATION CODES AND STANDARDS

The fryer must be installed in accordance with:

In the United States of America:

1. State and local codes.
2. National Electrical Code, ANSI/NFPA-70 (latest edition). Copies may be obtained from The National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

In Canada:

1. Local codes.
2. Canadian Electric Code, CSA C22.1 (latest edition). Copies may be obtained from The Canadian Standard Association, 178 Rexdale Blvd., Etobicoke, Ontario, Canada M9W 1R3.

ELECTRICAL CONNECTIONS

WARNING: ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH TO INDICATE YOU ARE WORKING ON THE CIRCUIT.

The wiring diagram is attached to the fryer.

Select the size and type of wire in accordance with the National Electrical Code suitable for carrying the fryer's rated amps and voltage. Use wires suitable for 75°C on fryers carrying more than 80 amps.

1. Bring conduit containing the proper supply wire to the fryer.
 - Bring the conduit in through the clearance hole in the back and terminate on the terminal block housing mounted in the back of the breaker box.
2. Connect the supply leads to the field terminal block and the green grounding lead to the labeled ground lug.

Fryers wired for 3-phase service may be changed to 1-phase or vice versa by relocating two wires on the terminal block as shown on the wiring diagram and the schematic decal which is attached to the fryer.

ELECTRICAL DATA CHART

Model	Total K.W. Conn.	3-Phase Loading KW Per Phase			Nominal Amps Per Line Wire											
					3-Phase									1 Phase		
		208, 240 & 480 V			208 V			240 V			480 V			208 V	240 V	480 V
		X-Y	Y-Z	X-Z	X	Y	Z	X	Y	Z	X	Y	Z			
VF1 VF1D	12	3.8	3.8	4.2	34	33	34	29	28	29	15	14	15	58	50	25

LEVELING

To level the fryer, place a carpenter's level on top of the fryer and turn the adjustable legs to level the fryer front to back and then side to side.

ASSEMBLY

The fryer must be restrained to prevent tipping when installed in order to avoid the splashing of hot liquid. The means of restraint may be the manner of installation, such as connection to a battery of appliances or installing the fryer in an alcove, or by separate means, such as adequate ties.

FRYERS MOUNTED ON CASTERS

Separate instructions for installing casters to the fryer are included with the casters.

BEFORE FIRST USE

Clean the fryer thoroughly, following the procedures outlined in the manual under CLEANING - WEEKLY OR AS REQUIRED. Clean all fryer accessories. Rinse all parts thoroughly and wipe dry.

Lightly season the backsplash area to avoid possible surface corrosion. With a soft, lint-free cloth, apply a thin layer of cooking oil over the entire backsplash area. This should also be done after every cleaning.

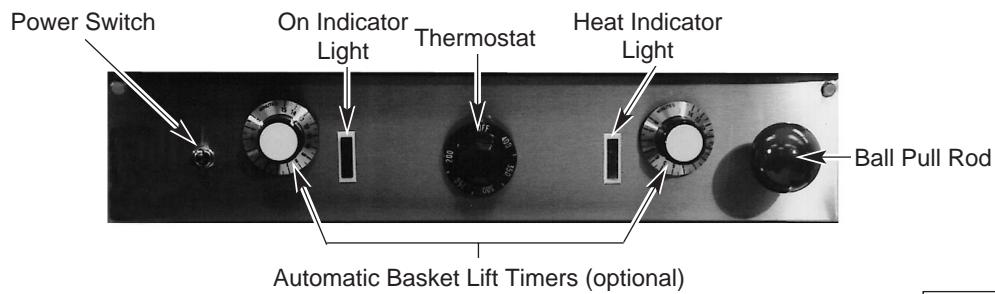
OPERATION

WARNING: THE FRYER AND ITS PARTS ARE HOT. BE VERY CAREFUL WHEN OPERATING, CLEANING OR SERVICING THE FRYER.

WARNING: SPILLING HOT FRYING COMPOUND CAN CAUSE SEVERE BURNS. DO NOT MOVE THE FRYER WITHOUT DRAINING ALL FRYING COMPOUND FROM THE TANK.

CONTROLS - MODEL VF1 (Fig. 1)

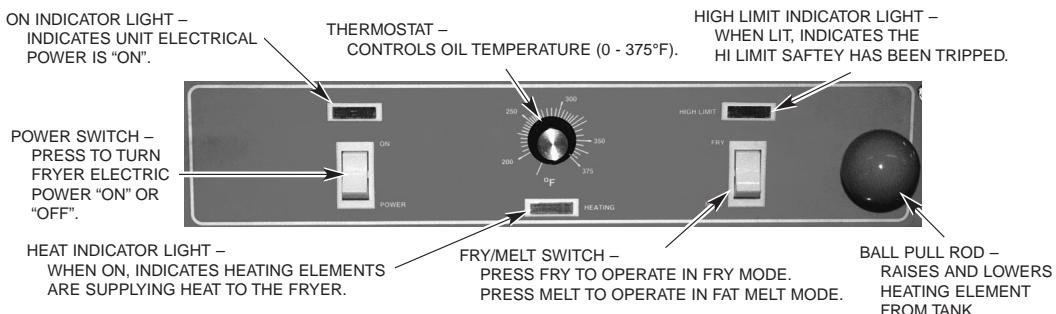
- | | |
|--|---|
| Power Switch | - Turns electric power to the fryer on or off. |
| ON Indicator Light | - (RED) Indicates electric power to the fryer is on. |
| HEAT Indicator Light | - (AMBER) Indicates the heating elements are supplying heat. |
| Thermostat | - Controls the temperature of the oil in the tank.
Temperature range is from 0 - 400°F (-18 to 204°C). |
| Fry/Melt Switch | - (Optional - Not Shown) Position on MELT when solid shortening is being melted; then position on FRY for normal operation. |
| Automatic Basket Lift Timers (Optional) | - Set to desired frying cycle time. At end of the set time, baskets will raise. Timer range is from 0 - 15 minutes. |
| Ball Pull Rod | - Raises elements from the tank when pulled straight out. Lowers elements into the tank when pushed in. |



PL-40539-1

Fig. 1

CONTROLS - MODEL VF1D (Fig. 2)



PL-41436-1

Fig. 2

ADDING LIQUID SHORTENING TO THE FRYER

Shortening should be between 1-2" (2.5-5 cm) above the top of the heating elements' surface.

Liquid shortening may be used in all fryers.

1. Push power switch to OFF and allow fryer to cool.
2. Remove the fryer basket.
3. Leave the heating elements in the tank and pour 30 - 35 pounds (13.6 - 15.8 kg) of shortening into the fryer tank.
4. Replace the fryer basket(s) inside the tank.
5. Push the power switch to ON and turn the temperature controller or thermostat to desired frying temperature.

ADDING SOLID SHORTENING TO THE FRYER

Only fryers equipped with the MELT cycle may use solid shortening. Melting solid shortening without using the MELT cycle will damage the fry tank and scorch the shortening. Tank warranty may be voided by improper operation.

1. Push power switch to OFF and allow fryer to cool.
2. Remove the fryer baskets
3. Leave the heating elements in the tank and place 30 - 35 pounds (13.6 - 15.8 kg) of solid block shortening into the fryer tank, on top of the heating elements.
4. Follow MELT cycle operation.

MELT CYCLE OPERATION

1. Set the temperature controller knob to frying temperature.
2. Push the power switch to ON.
3. Push Fry/Melt Switch to MELT. The elements will cycle on for 2 seconds and off for 28 seconds until the shortening melts and reaches a temperature of 135°F (57°C). The temperature controller will bring the shortening to frying temperature.
4. When ready to fry, place Fry/Melt switch in the Fry position.

FRYING

Place the ON/OFF switch to the ON position. The red ON indicator light will come on.

Turn the thermostat or temperature controller to desired temperature. The amber HEAT indicator light will come on.

- When the shortening temperature reaches the set temperature, the amber HEAT light will go off. The heating elements (and the amber HEAT light) will cycle on and off to maintain the set temperature.

Frying Tips

- Pieces of the product to be fried should be about the same size to ensure uniform doneness.
- When dealing with raw or wet foods, drain or wipe them dry to minimize splatter when lowering into the hot oil.
- Do not overfill baskets. The maximum capacity should be half full.
- Carefully lower basket(s) into oil.
- When cooking french fries or onion rings, shake the basket several times in a way that does not splatter the shortening.
- Batter-covered foods should be carefully dropped, one by one, into the shortening or basket. If you use the basket, first dip the basket into the shortening to reduce batter build-up on basket surfaces.
- When frying is completed, remove the basket(s) or product. Hang baskets to drain on rear basket hangers. Remove food and season it. Do not salt foods over the shortening because salt will cause a chemical change in the oil.
- Add fresh shortening as needed. Shortening should be between 1 - 2" (2.5 - 5 cm) above the heating elements.

TURNING THE FRYER OFF

To turn the fryer OFF, place the ON-OFF switch to the OFF position.

Extended Shutdown

Place ON-OFF switch to OFF. Turn the thermostat knob to OFF. Apply a thin film of cooking oil to the tank interior and the tank back to inhibit rust.

HIGH LIMIT CONTROL

If the shortening becomes overheated, or if the heating elements are not covered with shortening, the high limit control will shut down the entire control system and the fryer will be inoperable.

If the heating elements are not covered with shortening, add shortening until the level is 1-2" (2.5-5 cm) above the top of the heating elements. When the temperature of the shortening returns to normal (300°F / 149°C), manually reset the circuit breakers (located behind the fryer door). If the high limit control continues to shut the fryer down, contact your authorized Vulcan servicer.

DAILY FILTERING

Shortening life will be extended by filtering at least once a day, or more often if conditions warrant.

Models VF1 and VF1D have a removable fry tank that can be lifted out by raising the heating elements out of the tank, or the shortening can be siphoned out.

Siphoning

1. Turn the fryer OFF and allow the shortening to cool.
2. Place the siphon assembly (Fig. 3) so that the short tube rests on the bottom of the tank and the long tube projects down through the hole in the grease trough.
3. Tie the filter bag to the end of the long tube.
4. Provide a metal container of sufficient capacity at the end of the long tube inside the storage compartment.
5. To start the siphoning action, push the stopper inside the bowl closed.
6. Fill the bowl with clean liquid shortening.
7. Pull the stopper to allow shortening to start draining.
8. Push the stopper closed before all the shortening is drained from the bowl.

To stop draining, pull the stopper and empty the bowl completely.



Fig. 3

CLEANING

Daily

Clean the exterior of your fryer regularly with a damp cloth and polish with a soft dry cloth. If regular cleaning is neglected, grease will be burned on and discolorations may form. These may be removed by washing with any detergent or soap and water. A self-soaping scouring pad may be used for particularly stubborn discolorations. Always rub with the "grain" in a horizontal direction.

Keeping the fryer exterior clean and free of accumulated grease will prevent stubborn stains from forming. Wash all exterior surfaces at least once daily. Use a cloth with warm water and a mild soap or detergent. Follow with a clear rinse, then dry.

Fingerprints are sometimes a problem on highly polished surfaces of stainless steel. They can be minimized by applying a cleaner that will leave a thin, oily or waxy film. To use these cleaners, simply wipe on, then remove excess with a soft dry cloth. After using, subsequent fingerprints usually disappear when wiped lightly with a soft dry cloth or with a cloth containing a little of the cleaner.

If the surface is heavily soiled to start with, wash first with soap or detergent and water.

Weekly or As Required

1. Once the shortening has been drained, flush out scraps and sediment with a small amount of warm shortening. Allow the tank to drain thoroughly.
2. Fill the tank with a non-corrosive, grease-dissolving commercial cleaner, following the manufacturer's instructions.
3. Turn the fryer on and set the thermostat or temperature controller to a temperature recommended by the manufacturer of the commercial cleaner. Boil the solution for 15 to 20 minutes. If the cleaner is a water-based chemical, temperature may be 190-212°F (88-100°C). Set the temperature as low as possible; monitor boiling to prevent overflow.
4. Drain.
5. Refill the fry tank with water. Add 1 cup of vinegar to neutralize alkaline left by the cleaner. Bring solution to a boil and allow it to stand for a few minutes.
6. Drain and rinse thoroughly with clear, hot water. All traces of cleaner must be removed. Dry the tank thoroughly.
7. Add shortening until the level is between 1 - 2" (2.5 - 5 cm) above the heating elements.

The fryer is now ready for use.

Heat Tint

In and around equipment where temperatures reach 500°F (260°C) or more, straw-colored or slightly darkened areas may appear on stainless steel. This "Heat Tint" is caused by a slight oxidation of the stainless steel and is not harmful. To control this condition, never use more heat than is absolutely necessary. Heat tint can be removed by scouring vigorously with a stainless steel wool or a paste made of a scouring powder. Remember to rub in the direction of the polish lines.

Burned-On Foods and Grease

Soaking with hot soapy water will greatly help to remove burned-on foods and grease. Stubborn deposits can be removed with scouring powder mixed into a paste and applied with stainless steel wool or sponges. Never use ordinary steel wool since particles of the steel wool can become embedded in, or lodge onto, the surface of the stainless steel and eventually rust, causing unsightly spots and stains.

Never use ordinary steel scrapers and/or knives when scraping off heavy deposits of grease or oil from stainless steel equipment. Where it is necessary to scrape, use stainless steel, wood, plastic or rubber tools.

MAINTENANCE

WARNING: HOT OIL AND PARTS CAN CAUSE BURNS. USE CARE WHEN OPERATING, CLEANING AND SERVICING THE FRYER.

WARNING: SPILLING HOT FRYING COMPOUND CAN CAUSE SEVERE BURNS. DO NOT MOVE THE FRYER WITHOUT DRAINING ALL FRYING COMPOUND FROM THE TANK.

LUBRICATION

The motors in all fryers are permanently lubricated. No lubrication is required.

SERVICE AND PARTS INFORMATION

To obtain service and parts information concerning these fryers, contact the Vulcan-Hart service Depot in your area (refer to the listing supplied with the fryer) or Vulcan-Hart Company Service Department at the address or phone number shown on the front cover of this manual.

— NOTES —